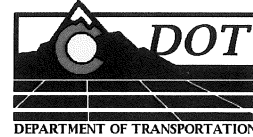


MEMORANDUM

DEPARTMENT OF TRANSPORTATION

4201 East Arkansas Avenue
Denver, Colorado 80222
(303) 757-9011



DATE: January 4, 2013

TO: Statewide Plan and Asset Management Committees

FROM: Debra Perkins-Smith, Division of Transportation Director

SUBJECT: Policy Directive 14 and Asset Management

Purpose

This memorandum summarizes the discussion planned for the Statewide Plan and Asset Management Committees meeting in January.

Action Requested

At the January meeting, staff will request input on the Purpose, Goal Areas, and Performance Measures for Infrastructure Condition (Bridge and Highway), and Maintenance in "draft" PD 14.

Background

Policy Directive 14 is revisited as one of the first steps in developing the Statewide Plan. PD 14 should reflect current Department thinking and Transportation Commission direction. PD 14 should provide an overall framework for developing the multimodal Statewide Plan, the Statewide Improvement Program (STIP), budget, and in allocating resources. In addition, it provides a structure for performance reporting post Statewide Plan adoption.

The current adopted version of PD 14 developed in 2006, in concert with the Statewide Plan update, contained aspirational goals that were often not met and there was little connection to funding constraints, the allocation of resources and budget development.

Over the past two months, staff has provided to SWP Committee, the overall framework for the "draft" PD 14, an overview of the Asset Management and Performance Reporting efforts at CDOT and information illustrating the linkage between PD14 and Asset Management and associated MAP21 requirements.

MAP-21 requires States to establish performance measures and targets (objectives in "draft" PD 14) and allocate funds accordingly to achieve the stated targets/objectives. Penalties will be enforced if the stated targets/objectives are not met. Therefore, careful consideration needs to be given in establishing performance measures and stated targets/objectives.

In preparation for the joint Committee meeting in January, attached is a copy of the "draft" PD14 which includes the revised Purpose, Goal Areas, and Performance Measures for Infrastructure Condition (Bridge and Highway), and Maintenance.

Next Steps

At the February SWP Committee meeting, staff will provide the SWP Committee with proposed Performance Measures for Safety and Project Delivery.

**Transportation Commission of Colorado
Statewide Plan and Asset Management Joint Committee Meeting**

**Meeting Agenda
Wednesday, January 16 – 3-4 PM
4201 East Arkansas Avenue, Denver, CO**

**Debra Perkins-Smith, Director
Division of Transportation Development**

**Ed Peterson, Chair
District 2, Lakewood**

**Steve Parker
District 8, Durango**

**Kathy Gilliland
District 5, Livermore**

**Douglas Aden
District 7, Grand Junction**

**Scott Richrath, Transportation Performance Branch Manager
Division of Transportation Development**

**Les Gruen, Chair
District 9, Colorado Springs**

**Kathy Connell
District 6, Steamboat Springs**

**Heather Barry
District 4, Westminster**

- **Approve SWP Committee December 19, 2012 Minutes –
5 minutes – Ed Peterson, Chairman**
- **Approve Asset Management Committee December 20, 2012 Minutes –
5 minutes – Les Gruen, Chairman**
- **Policy Directive 14 and Asset Management – 50 minutes – Debra Perkins-Smith**
- **Adjourn**

THIS AGENDA MAY BE ALTERED AT THE CHAIR'S DISCRETION

STATEWIDE PLAN COMMITTEE

Date: December 19, 2012

Joint Committee Members Attending: Commissioner Parker, Commissioner Peterson, Commissioner Aden, and Commissioner Gilliland (via telephone)

Others Attending: Commissioner Reiff (via telephone), Don Hunt, CDOT Executive Director; Debra Perkins-Smith, CDOT DTD Director; Jeff Kullman, Atkins; Vince Rogalski, STAC Chairman; Kerrie Neet, CDOT Region 5; Steve Cook, DRCOG; Tony Devito, CDOT Region 1; David Eller, CDOT Region 3; Johnny Olson, CDOT Region 4; Lizzie Kemp, CDOT Region 6; Mark Imhoff, DTR Director; Rebecca White, CDOT OPGR; Scott Richrath, CDOT TPB; Kurt Morrison, CDOT OPGR; Kathleen Collins, CDOT Statewide Planning; Aaron Willis, CDOT Statewide Planning; Don Clem, Portland Cement; and a member of the public

Minutes:

- *Meeting Minutes:* November 2012 meeting minutes were approved.
- *MAP-21 and Asset Management:* Staff presented information relating to MAP-21 and its influence on CDOT's asset management program. A MAP-21 Timetable was presented. A key date for MAP-21 is April 1, 2014, when FHWA Final Rulemaking for performance measures, and transportation asset management plans are due.
 - MAP-21 has identified National Goals and Measures and requires reporting on performance, and developing a risk-based asset management plan for the National Highway System.
 - CDOT asset management program currently includes: pavement, bridge, maintenance LOS, fleet, and Intelligent Transportation System (ITS); Buildings will be added. CDOT is also considering the addition of retaining walls, tunnels, and culverts
 - Commissioners in attendance (in person) all agreed and stressed the point that tunnels should be a priority to consider adding to the asset management program.
 - An inquiry regarding the status of considering alternative fuel vehicles for CDOT's fleet was raised and the importance of developing a related strategy for economizing in the future was stressed. Staff explained that the Governor's Office on Energy is working on an effort to get manufacturers on board with producing more CNG vehicles. Pertaining to CDOT's "Orange Fleet" (the large orange trucks CDOT owns), they will be replaced one at a time as their useful life ends. In addition, CDOT is conducting research regarding how other State DOTs have transitioned to alternative fuels under CDOT's Sustainability Program.
 - As a result of MAP-21, PD 14 will be modified to correspond to the MAP-21 National Goals. No goals for fleet or ITS have been established yet.
 - TC will participate in the financial plan and investment strategies development related to the Asset Management Plan.

- TC will need to establish goals for transit infrastructure. Joint meetings are being held to discuss how to begin collecting the critical data for infrastructure (fleet of 1,000) that CDOT does not own. A framework for Transit Performance Measures has been developed with the assistance of a consultant through the TRAC (Transit and Rail Advisory Committee). In addition, transit agencies will be required to have asset management programs, and a new transit module is being developed. Transit grantees will also be required to provide updated information on assets and infrastructure to remain eligible for grant funding.
- There is a desire and need for good, solid transit data for incorporation of transit measures and targets into PD 14.
- In addition, staff stressed the point that under MAP -21, the Transportation Commission (TC) will need to adopt performance targets that must be met (or jeopardize receiving federal funds), versus establishing aspirational goals as done in the past. This will be discussed further in January 2013 during PD 14 conversations.
- *Setting Priorities – Research from Other States:* Staff presented information on how state DOTs set priorities including: Arizona, Kansas, Florida and Wisconsin.
 - There is interest in linking economic vitality criteria in the context of tiering and the least cost approach for pavement. Need criteria that include all areas of the state (urban and rural). Need to consider energy (coal and natural gas) industry corridors.
 - Florida's tolling program is of interest and a request was made to find out more on how they fund their expansion projects through tolling. Also want to know if Florida permits funds generated by tolls to be spent outside of tolled corridors.
 - Research is important, especially on the topic of economic stimulus for setting priorities.
 - There is interest in learning more about how Michigan selected their economic corridors and looking into more detail at priority corridors.
 - Staff informed attendees of the Economic Tool Kit project that started at CDOT two months ago. CDOT has hired a consultant to develop this tool and the Performance Branch has also hired an economist to help CDOT make informed decisions regarding establishing economic criteria.
- *Managed Lanes Policy Update:* Staff asked if anyone had additional comments on the draft Managed Lane Policy and read the policy to attendees.
 - Question was raised regarding if there had been any push back pertaining to including the word "strongly" consider managed lanes for every project. Staff responded that no negative feedback had been received to date, and that comments generally requested the stronger language. However, the policy needs to also provide enough flexibility to not limit to only toll managed lanes. Guidance developed can be prescriptive to identify all opportunities.

ASSET MANAGEMENT COMMITTEE

Date: December 20, 2012

Committee Members Attending: Commissioner Gruen and Commissioner Connell

Others Attending: Commissioner Reiff, Commissioner Rogers, Commissioner Peterson, Commissioner Gilliland, Commissioner Aden, Commissioner Parker, Commissioner Ortiz, Commissioner Hofmeister, Don Hunt, Debra Perkins-Smith, Tim Harris, Scott Richrath, JoAnn Mattson, Ken DePinto, Rich Sembrat, Steve Rudy (DRCOG), Randy Jensen (FHWA), Vince Rogalski (STAC), Harry Morrow (Counsel), Mark Imhoff and other members of the public.

Minutes:

- Commissioner Gruen welcomed attendees to the Asset Management Committee meeting. The Committee members then approved the minutes from the November meeting.
- Commissioner Gruen noted that he worked with Scott and Director Hunt on reviewing the Fleet Memorandum between Committee meetings.
- Director Hunt shared that he had a good conversation with Bill Schiebel regarding the disconnect between roads in Colorado which have an RSL of 0 yet are fine to drive on. Director Hunt mentioned that an AASHTO report noted the same. They agreed that at least for a portion of the network a measure for drivability can be applied. Director Hunt noted that it will take a couple of years to transition to a new methodology and for now let's use the model we have and add additional criteria specific to low volume roads. Commissioner Connell stated that it is still important to provide some funding to low volume roads. Commissioner Aden noted that in yesterday's Statewide Plan Committee meeting the group discussed the importance of economic development, and that low volume roads that are important economically to the state need to be considered for funding. Director Hunt has convened a January 2nd meeting for CDOT asset managers. Commissioner Reiff stated that the approach needs to change to a statewide approach to low volume roads and not a regional approach. There should not be an off the top allocation to each region for surface treatment; instead there should be a statewide approach.
- Scott provided an overview of the ITS equipment and fiber in Colorado. Ken shared that ideally we will have fiber on all highways, since fiber supports cameras and road weather systems, and by working with partners we can trade and gain fiber at no cost. Commissioner Connell asked if there is a strategic plan for fiber eventually going north/south, recognizing that the focus is on I-70 today. Ken shared that each region has an architecture plan that outlines the region's priorities. Director Hunt said that region plans are good for when funds appear but they only go so far and we need to prioritize at the statewide level. Commissioner Parker asked about agreements with neighboring states, citing Wyoming as an example. Ken said that CDOT has a good relationship with all of our neighboring states and they all have the phone numbers of the traffic centers, so he called Kansas and they discussed hotels and other logistics for travellers. Regarding Wyoming, CDOT's fiber goes all the way to Wyoming however they do not have fiber from the state line to Cheyenne. Ken said that CDOT requested ITS partnerships across the state about 3 years ago and there were no responses, but that we can try again since the timing may have been wrong for the industry.
- Scott showed a slide summarizing the ITS equipment by count and average % useful life, and the average cost for replacement. Director Hunt asked if the manufacturing specs for ITS are valid, since equipment can last a long time. Ken said that like your computer at home, while it may work for many years, it may also be slow and not have the latest technology, and to avoid having all equipment go bad at once CDOT cycles equipment out. Director Hunt asked Ken to find out more about what other states are using as far as life cycle assumptions for ITS devices, and he asked if the replacement decisions are based on a risk-based management approach. Ken noted that most of the devices have redundant components and 4 hour replacement times, and the backbone has a manufacturer warranty. Director Hunt noted that using a risk-based approach CDOT may decide to replace high risk devices per the manufacturer's recommendation, while for low-risk devices CDOT may decide to leverage them longer than manufacturer's specs. Commissioner Gruen concurred that we need to think strategically.

- Scott shared that unlike the other assets this committee has discussed, ITS is actually growing and more devices are coming online. Director Hunt said that the asset management committee is focused only on maintaining and replacing equipment and that capital investment will be discussed elsewhere.
- Scott showed the various budget scenarios considered for ITS maintenance, operations and replacement. Ken pointed out that technology improves and gets cheaper over time, and in the future we'll be doing more device troubleshooting remotely and some technology will shift to vehicles. Scott agreed that a 5-10 year horizon may be more relevant for ITS.
- Director Hunt suggested that perhaps a 0% inflation rate should be used for ITS. However, when you factor in utility bills and server licenses, along with a growing inventory, these items may offset any reduction in device cost.
- Commissioner Gruen then asked for an update on FleetManagement in SAP, and if the consultant finished his work as expected on December 17th. Scott did not have the answer at the meeting, but contacted Dave Wieder after the meeting and learned that the consultant did finish work as expected on December 17th.

PD 14 – CDOT Statewide Transportation Planning

COLORADO DEPARTMENT OF TRANSPORTATION		<input checked="" type="checkbox"/> POLICY DIRECTIVE <input type="checkbox"/> PROCEDURAL DIRECTIVE	
Subject Statewide Transportation Planning			Number 14.0
Effective XX/XX/12	Supersedes 03/20/08	Originating office Transportation Commission	

PURPOSE

This policy directive provides an overall framework for the transportation planning process through which a multimodal, comprehensive Statewide Transportation Plan will be developed that optimizes the transportation system by balancing preservation, efficient operations and management practices, and capacity improvements. PD 14 will guide allocation of resources in support of performance objectives for the Statewide Plan, the Statewide Transportation Improvement Program, and the annual budget. Other CDOT documents that also lay the groundwork for transportation planning are the values, vision, and mission statements in Policy Directive (PD) 2, the Transportation Commission Rules Governing the Statewide Transportation Planning Process and Transportation Planning Regions (2 CCR 601-21), and the Risk-Based Asset Management Plan mandated by the federal transportation authorization bill. PD 14 will be reviewed and updated or reaffirmed with each Plan update cycle. This Policy Directive includes:

- Goals;
- Performance measures and objectives; and
- Planning principles.

GOALS

CDOT transportation goals guide development of the Statewide Transportation Plan and will be used for measuring and reporting on system performance objectives after plan adoption. The goals are:

- SAFETY – Reduce traffic fatalities and serious injuries and work toward zero deaths for all users of the state highway system.
- INFRASTRUCTURE CONDITION – Manage transportation infrastructure condition to ensure safety and mobility at a least life cycle cost.
- SYSTEM PERFORMANCE – Improve system reliability, reduce congestion, and support opportunities for mode choice.
- MAINTENANCE – Maintain CDOT's roadways and facilities in good working condition.
- PROJECT DELIVERY – Improve project development in order to better delivery times.

PERFORMANCE MEASURES AND OBJECTIVES

Performance objectives help CDOT allocate funds effectively and describe how CDOT measures success in five areas: safety, infrastructure condition, system performance, maintenance, and project delivery.

1. SAFETY:

MEASURES:

- Serious injuries per vehicle miles traveled (VMT)
- Fatalities per VMT
- Number of serious injuries
- Number of fatalities

OBJECTIVES:

- Lower the annual serious injury crash rate of ___ per 100 million VMT.
- Annually achieve a ___ five-year annual average fatality rate per 100 million VMT.
- Reduce by ___ per year the number of serious injury crashes.
- Achieve a five-year moving average of ___ fatalities by XXXX and ___ fatalities by XXXX.

2. INFRASTRUCTURE CONDITION:

A. Bridge

MEASURES:

- Bridge condition on the National Highway System (NHS), including the Interstate System.
- Condition of CDOT-owned bridges on the NHS.
- Condition of CDOT-owned bridges on non-NHS roadways. .
- Bridge condition on the state highway system.

OBJECTIVES:

- Maintain the percent of total deck area on structurally deficient bridges on the NHS, including the Interstate System, below 10% as required by MAP-21.
- Maintain the percent of total deck area that is on structurally deficient CDOT-owned bridges that are on the NHS, including the Interstates, below ___%.
- Maintain the percent of total deck area that is on structurally deficient CDOT-owned bridges that are on non-NHS roadways below ___%.
- Maintain a system condition level of ___% good/fair for bridges on the state highway system.

B. Highways

MEASURES:

- Pavement condition of the Interstate system.
- Pavement condition of the state highway NHS, excluding Interstates.
- Pavement condition on the total NHS (awaiting federal guidance)
- Pavement condition of state highway non-NHS roadways.
- Pavement condition of the state highway system.

OBJECTIVES:

- Maintain pavement condition level of __% Good/Fair Drivability for Interstates.
- Maintain pavement condition level of __% Good/Fair Drivability for state highway NHS, excluding Interstates.
- Maintain pavement condition level of __% Good/Fair Drivability on the total NHS (awaiting federal guidance).
- Maintain pavement condition level of __% Good/Fair Drivability for state highway non-NHS roadways.
- Maintain systemwide pavement condition level of __% Good/Fair Drivability for state highways.

Note: Drivability standards for Good/Fair condition assessment vary between highway classifications, with Interstates having the highest CDOT drivability standards required to achieve Good/Fair status.

C. Other Roadway Assets

MEASURE:

- Asset Management Plan Goals

OBJECTIVE:

- Meet Asset Management Plan Goals

D. Transit

MEASURE:

- Transit Asset Condition

OBJECTIVES:

- Reduce the percentage of the transit fleet operating past Federal Transit Administration useful life standards to below __% annually for all transit agencies.
- All transit agencies receiving federal funds through CDOT will have transit asset management programs for fleet, buildings, and equipment by XXXX.

3. SYSTEM PERFORMANCE:

MEASURES:

- Traffic congestion - Annual hours of delay above a congestion threshold on Interstate and NHS corridors
- Performance of Interstate Corridors – Reliability Index, the ratio of travel time to a threshold travel time
- Performance of NHS Corridors - Reliability Index, the ratio of travel time to a threshold travel time
- Performance of alternate modes – To be determined
- Useful life of Intelligent Transportation System (ITS) equipment

OBJECTIVES:

- Maintain travel time delay in congested corridors at or below ___ annual hours of delay.
- Attain a Reliability Index of ___ percentile travel time in congested corridors on Interstate and NHS corridors.
- Reduce incident clearance times by ___% per year.
- Increase person throughput in congested corridors ___% per year.
- Maintain ITS equipment below an average of ___% of its useful life.

4. MAINTENANCE:

MEASURES:

- Overall Level of Service (LOS) grade for snow and ice removal
- Overall Maintenance Level of Service (MLOS) grade for the state highway system

OBJECTIVES:

- Maintain an LOS ___ grade for snow and ice removal.
- Maintain an overall MLOS ___ grade for the state highway system.

5. PROJECT DELIVERY

MEASURE:

- Percent of CDOT projects advertised within 30 days of the ad dates established on 7/1 of fiscal year

OBJECTIVES:

- ___% of projects is advertised within 30 days of the target advertisement date established on July 1 of the fiscal year.

PLANNING PRINCIPLES

The planning principles describe how CDOT conducts business in carrying out the statewide transportation planning process.

CUSTOMER FOCUS

Improve customer service and satisfaction by focusing on the priorities identified in periodic customer surveys. Ensure the public has multiple ways of learning about and participating in transportation planning and in regional and statewide transportation decision making.

PARTNERSHIPS

Collaborate with CDOT planning partners to build consensus for the integration of local, regional and statewide transportation priorities in the multimodal Statewide Transportation Plan and to reach data-based transportation planning solutions. Partner with other agencies and the private sector to leverage resources and to augment public funds.

PERFORMANCE-BASED PLANNING AND PROGRAMMING

Use a performance-based planning and programming approach in developing the next corridor-based multimodal Statewide Transportation Plan. This data-driven approach in making investment and policy decisions will help achieve targets for national performance goals. Needs assessments to identify and analyze corridor transportation capacity, reliability, and maintenance needs and strategies for both the 10-year and 20-year planning horizons are an important element.

FINANCIAL PLANNING

In cooperation and consultation with CDOT planning partners, and in recognition of declining revenues and increasing costs, develop reasonable Revenue Forecasts for the planning horizon and Resource Allocation that optimize the use of funds in addressing critical transportation needs. Undertake financial scenario planning in order to be prepared for different levels of future funding for different time periods of the Plan. Investigate alternative transportation funding and identify its potential impact upon the transportation system.

ECONOMIC VITALITY

Recognizing that Colorado's transportation system constitutes a valuable resource and a major public and private investment that directly affects the economic vitality of the state, enhance Colorado's economic competitiveness by supporting measures that facilitate freight movement and promote state, regional and local economic goals.

ENVIRONMENTAL SUSTAINABILITY

Incorporate social, economic, and environmental concerns into the planning, design, construction, maintenance, and operation of a state transportation system. Support coordinated decision making that balances transportation, land and resource use, and quality of life needs. Promote a transportation system that minimizes impacts to and encourages preservation of the environment, and follows the CDOT Environmental Stewardship Guide. Provide a sustainable transportation system that meets existing needs without compromising the ability to provide for the future.

This PD shall be reviewed with each plan update cycle, but no later than March 2018.